

# **EXHIBIT J**

**E-A-RCAL ATTENUATION TEST REPORT  
PER ANSI S3.19-1974**NVLAP Lab  
Code 100374-0**DEVICE:** Combat Arms Plug  
ARC Plug**DEVICE TYPE:** Premolded, Level-dependent Plug**MANUFACTURER:** E-A-R/Aearo**TEST DATE:** January 25, 2000**TEST ID#:** 213016**SUBJECTS/SAMPLES:** 10/10**NRR (per EPA-1979):** -2.0**BAND FORCE (N):** NA**FITTING PROCEDURE:** EPA/Experimenter Fit**POSITION:** NA

Test Frequency (Hz)	Mean Attenuation (dB)	Standard Deviation (dB)
125	4.7	4.0
250	4.2	4.3
500	6.0	5.0
1000	9.5	6.7
2000	16.7	4.9
3150	18.6	5.7
4000	16.3	5.8
6300	16.7	6.1
8000	17.2	6.8

Performed by:

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Sr. Acoustic Technician

Reviewed by:

*Elliott H. Berger*Elliott H. Berger  
Manager, Acoustical Engineering**Comments:** See report #213017 for results of UltraFit end of plug.

## INDIVIDUAL SUBJECT DATA

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Test ID: 213016

Device: Combat Arms Plug

Date: 1/25/00

Samples: 10

Position: NA

Comfort:

2.6

Comments:

Subj.	Trial	1/3 Octave-Band Frequency										Canal Size	NRR*
		125	250	500	1000	2000	3150	4000	6300	8000	125	Comf.	
KJC	1	5	6	7	16	21	24	24	18	14	1		S/S+
	2	5	6	9	16	21	22	22	14	13	3		
	3	1	4	11	19	20	25	23	16	16	3	2	
MKF	1	2	3	11	18	22	28	26	16	17	3		XS-/XS-
	2	3	6	11	17	23	27	25	15	13	6		
	3	3	7	13	16	22	32	25	18	12	1	4	
GWG	1	-2	3	8	18	24	21	21	21	23	2		M/M+
	2	0	-1	-2	-1	9	12	7	14	10	1		
	3	4	-1	3	5	13	19	14	14	16	4	3	
BAK	1	3	6	4	11	17	18	21	25	26	4		XL/XL
	2	5	3	8	12	17	15	13	29	29	3		
	3	9	4	0	8	15	20	18	28	32	6	2	
RTM	1	2	-4	0	2	13	17	14	6	11	1		L/M+
	2	3	2	6	5	14	13	14	12	10	3		
	3	2	-5	-5	-2	13	10	7	8	9	2	1	
DLP	1	4	5	9	10	21	22	19	15	17	5		L+/L+
	2	7	7	12	15	21	21	20	22	27	8		
	3	6	8	9	15	27	23	18	25	22	3	1	
TLS	1	3	3	2	1	11	12	12	11	12	1		M+/M
	2	8	4	5	3	14	14	12	21	20	6		
	3	2	2	2	0	7	15	9	7	9	2	1	
TRS	1	4	11	8	17	15	14	17	17	22	2		S/S
	2	1	2	-1	0	9	8	5	8	5	-2		
	3	4	0	2	3	10	14	8	9	10	2	2	
MV	1	13	11	9	14	17	19	16	21	23	15		M/M+
	2	13	9	7	11	15	24	20	22	18	12		
	3	16	15	14	14	18	22	18	23	25	13	2	
JMW	1	8	6	13	11	18	17	17	17	21	6		M/M+
	2	2	2	4	6	17	16	13	13	15	1		
	3	5	1	2	6	17	13	12	15	20	3	8	
Mean		4.7	4.2	6.0	9.5	16.7	18.6	16.3	16.7	17.2	4.0	2.6	1.7
sd(30)		4.0	4.3	5.0	6.7	4.9	5.7	5.8	6.1	6.8	3.8	----	----
sd(10)		3.6	3.7	3.9	5.6	4.3	5.4	5.1	5.5	5.7		2.1	7.2
Q-Value		12.8	4.2	-0.7	-3.8	5.7		4.9		5.2			

NRR (2sd) = -2.0 (1sd) = 3.8 (0sd) = 9.4 NRR\* - Individual 2sd NRR

## DIXON'S OUTLIER TEST: EXTREME RANGES

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Test ID: 213016

Device: Combat Arms Plug

Range in attenuation in dB across trials

Subj.	1/3 Octave-Band Frequency								
	125	250	500	1000	2000	3150	4000	6300	8000
KJC	4	2	4	3	1	3	2	4	3
MKF	1	4	2	2	1	5	1	3	5
GWG	6	4	10	19	15	9	14	7	13
BAK	6	3	8	4	2	5	8	4	6
RTM	1	7	11	7	1	7	7	6	2
DLP	3	3	3	5	6	2	2	10	10
TLS	6	2	3	3	7	3	3	14	11
TRS	3	11	9	17	6	6	12	9	17
MV	3	6	7	3	3	5	4	2	7
JMW	6	5	11	5	1	4	5	4	6
Mean	3.9	4.7	6.8	6.8	4.3	4.9	5.8	6.3	8.0
Max.	6	11	11	19	15	9	14	14	17
r	0.000	0.444	0.000	0.125	0.571	0.333	0.167	0.364	0.286

Extreme value rejected if  $r > 0.477$ . One-sided test of significance at  $p < 0.05$ .

Rejected values are shaded.

## DIXON'S OUTLIER TEST: EXTREME MEANS

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Test ID: 213016

Device: Combat Arms Plug

Mean attenuation in dB across trials

Subj.	1/3 Octave-Band Frequency								
	125	250	500	1000	2000	3150	4000	6300	8000
KJC	3.7	5.3	9.0	17.0	20.7	23.7	23.0	16.0	14.3
MKF	2.7	5.3	11.7	17.0	22.3	29.0	25.3	16.3	14.0
GWG	0.7	0.3	3.0	7.3	15.3	17.3	14.0	16.3	16.3
BAK	5.7	4.3	4.0	10.3	16.3	17.7	17.3	27.3	29.0
RTM	2.3	-2.3	0.3	1.7	13.3	13.3	11.7	8.7	10.0
DLP	5.7	6.7	10.0	13.3	23.0	22.0	19.0	20.7	22.0
TLS	4.3	3.0	3.0	1.3	10.7	13.7	11.0	13.0	13.7
TRS	3.0	4.3	3.0	6.7	11.3	12.0	10.0	11.3	12.3
MV	14.0	11.7	10.0	13.0	16.7	21.7	18.0	22.0	22.0
JMW	5.0	3.0	6.3	7.7	17.3	15.3	14.0	15.0	18.7
Mean	4.7	4.2	6.0	9.5	16.7	18.6	16.3	16.7	17.2
Min.	0.7	-2.3	0.3	1.3	10.7	12.0	10.0	8.7	10.0
Max.	14.0	11.7	11.7	17.0	23.0	29.0	25.3	27.3	29.0
Low r	0.333	0.296	0.276	0.021	0.057	0.114	0.077	0.200	0.194
High r	0.714	0.441	0.192	0.000	0.057	0.340	0.163	0.333	0.420

Extreme value rejected if  $r > 0.551$ . Two-sided test of significance at  $p < 0.05$ .  
 Rejected values are shaded.